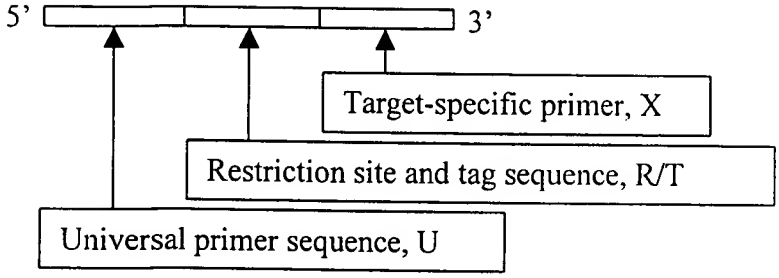
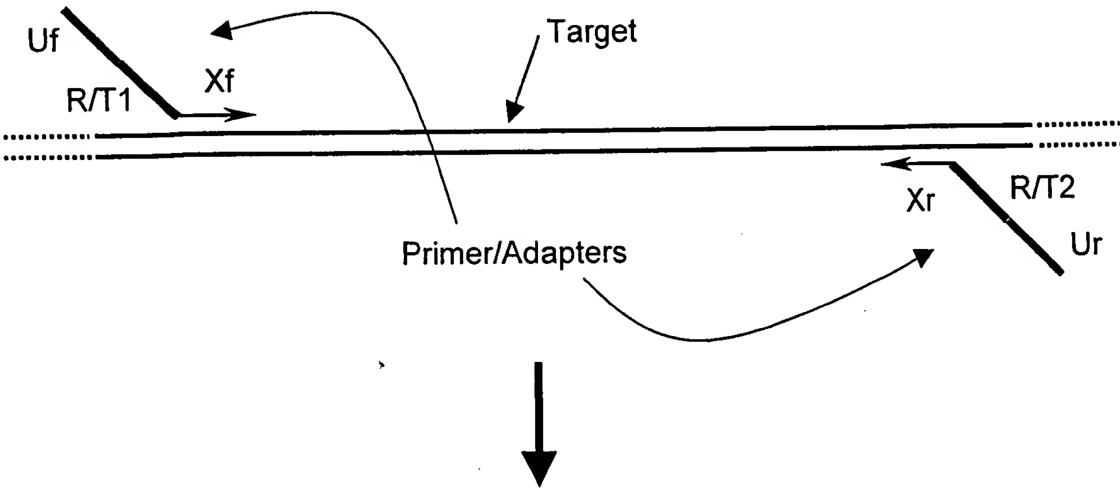

5'
3'
Target-specific primer, X
Restriction site and tag sequence, R/T
Universal primer sequence, U

FIG. 1

1) PCR with low concentrations of target-specific primer/adapters



2) PCR with high concentrations of universal primers

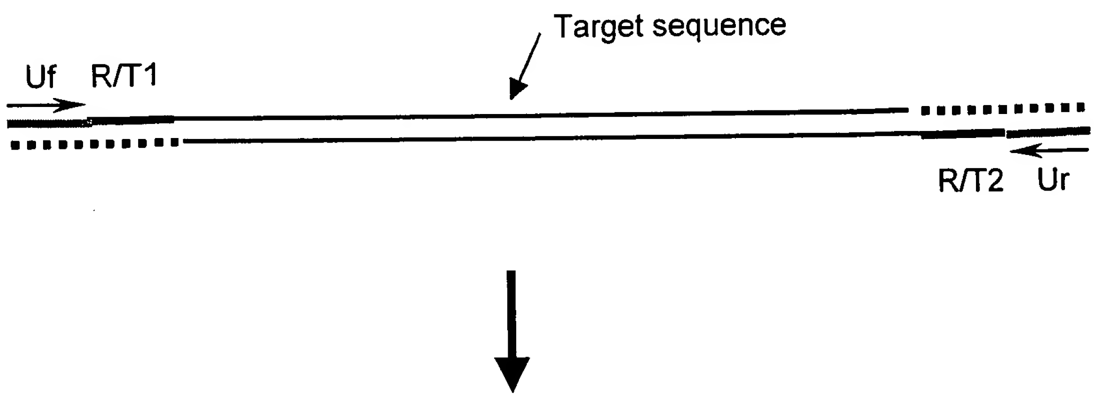
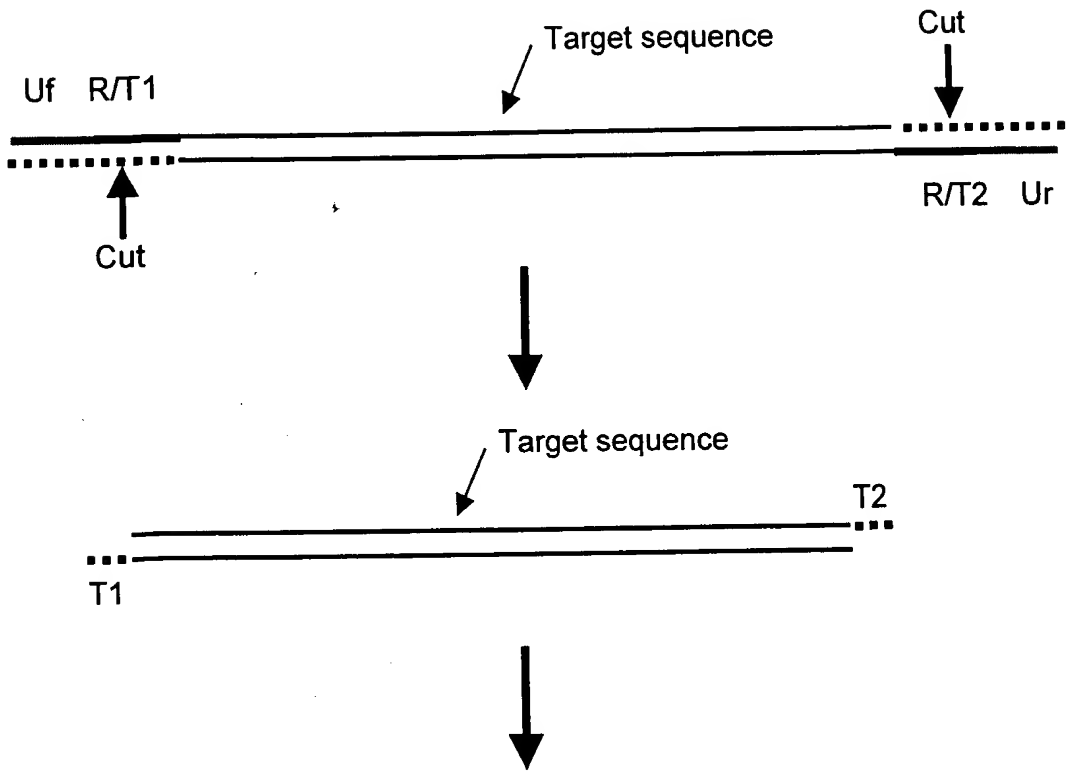


FIG. 2
(1 OF 3)

3) Digest with restriction enzyme, leaving tag sequences in the 3' overhangs at the ends of the target sequence



4) Capture target sequence on either or both of two partially duplex probes, complementary to tags T1 or T2.

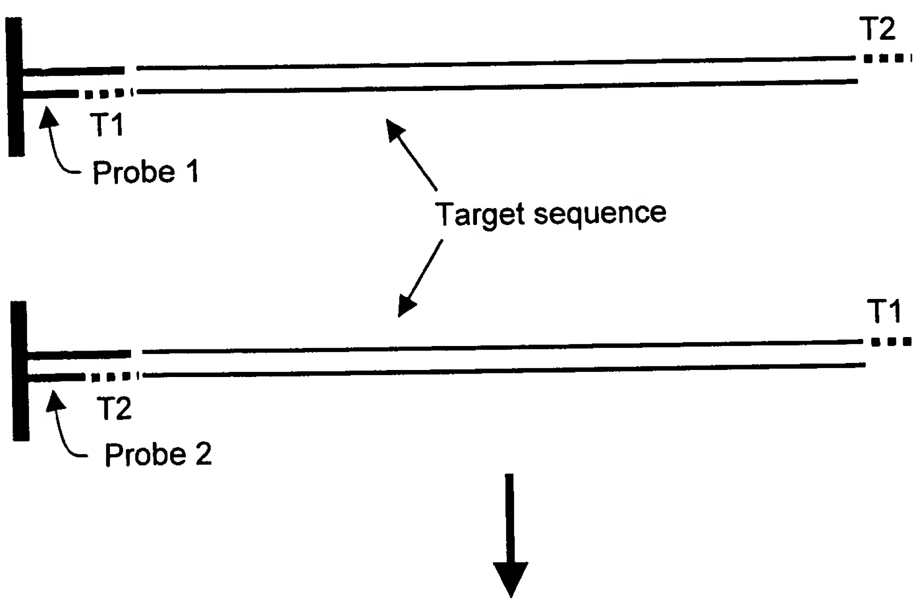


FIG. 2

(2 OF 3)

5) Ligate and wash with high stringency to leave one strand of target sequence on each of the two probes

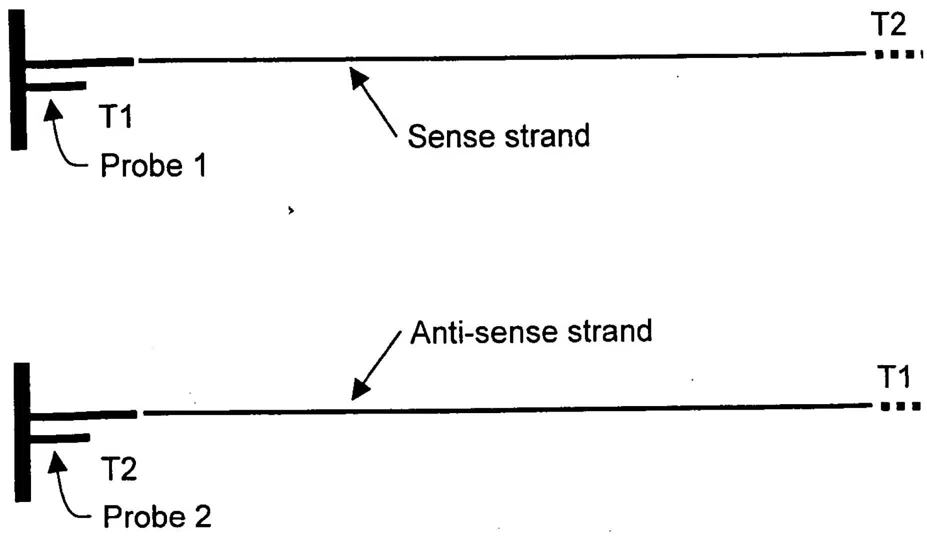
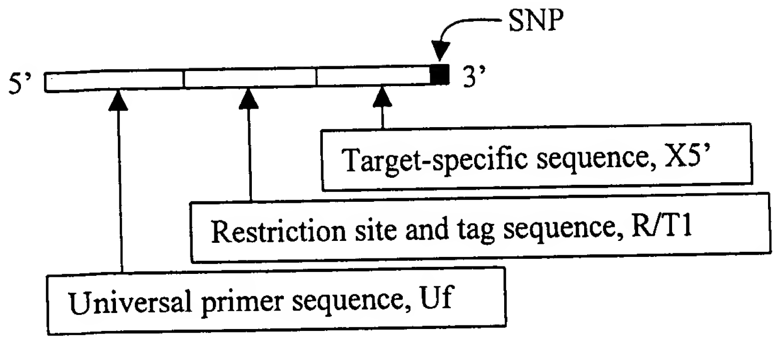


FIG. 2

(3 OF 3)

3A


SNP
5'
3'
Target-specific sequence, X5'
Restriction site and tag sequence, R/T1
Universal primer sequence, Uf

3B

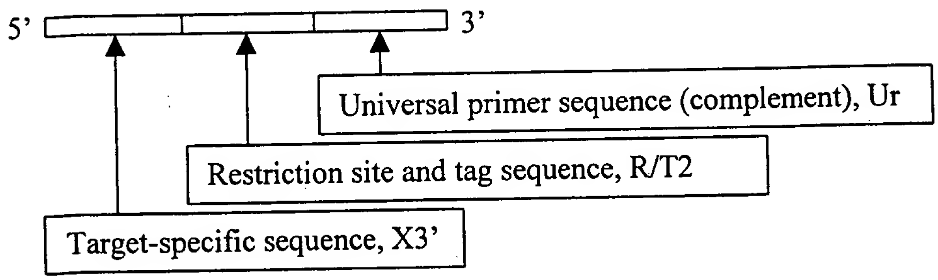

5'
3'
Universal primer sequence (complement), Ur
Restriction site and tag sequence, R/T2
Target-specific sequence, X3'

FIG. 3A-B

1) Hybridization and ligation of 5' Probe/Primer and 3' Probe/Primer to denatured (single-stranded) target sequence

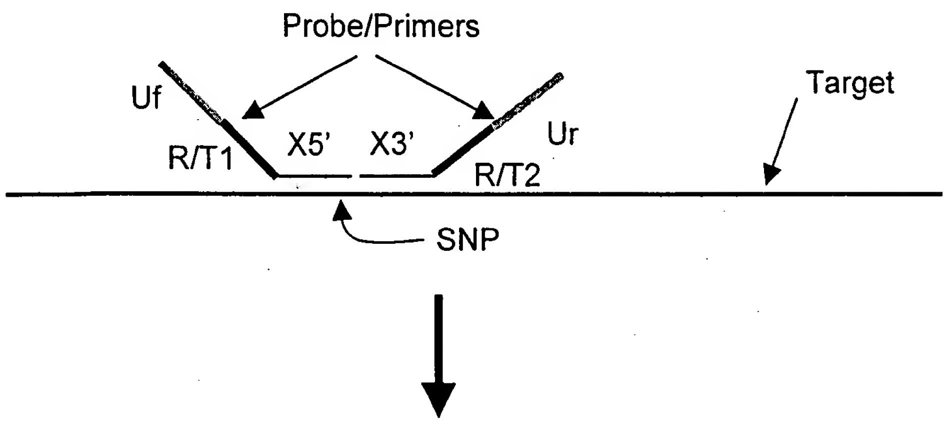
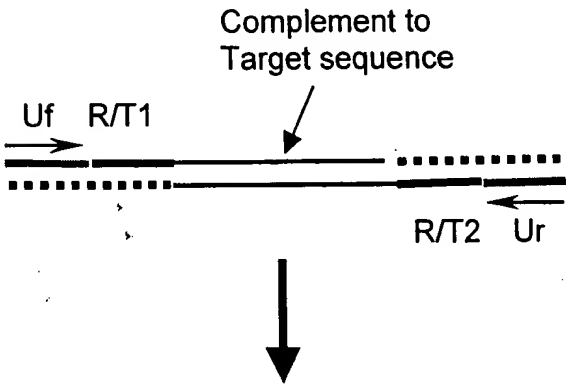


FIG 4

(1 OF 3)

2) PCR with high concentrations of universal primers, Uf and Ur



3) Digest with restriction enzyme, leaving tag sequences in the 3' overhangs at the ends of the target sequence

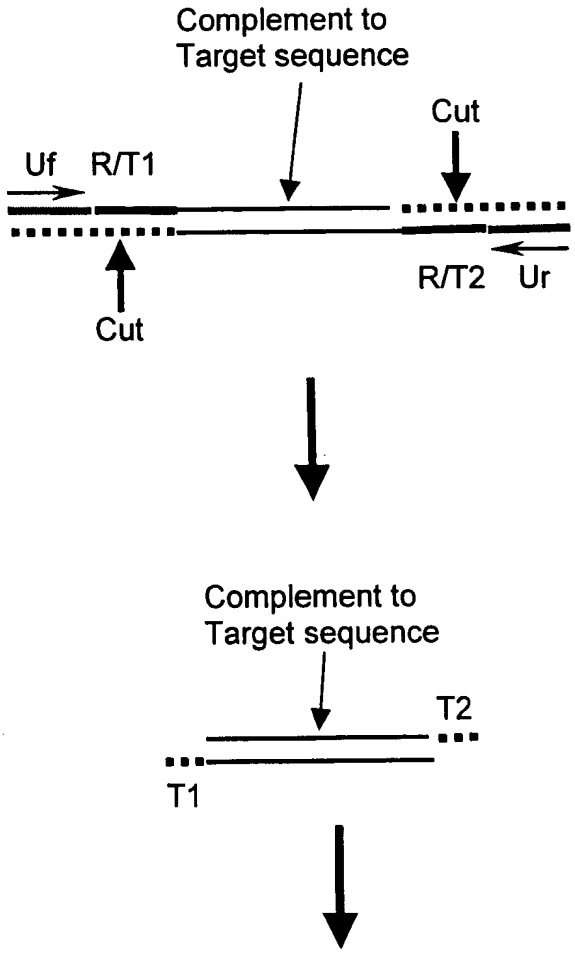
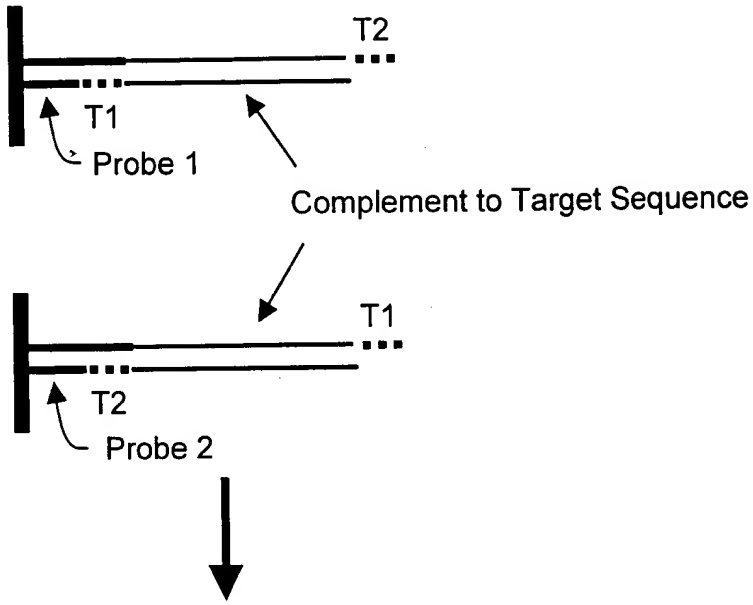


FIG. 4

(2 OF 3)

4) Capture target sequence on either or both of two partially duplex probes, complementary to tags T1 or T2.



5) Ligate and wash with high stringency to leave one strand of target sequence on each of the two probes

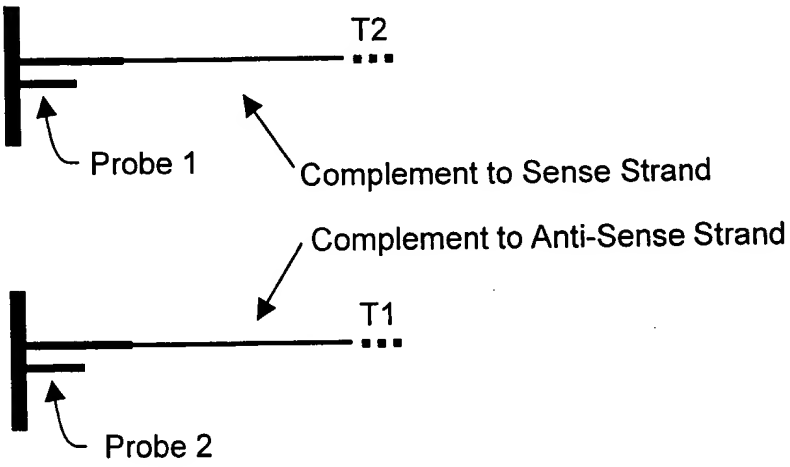


FIG. 4

(3 OF 3)

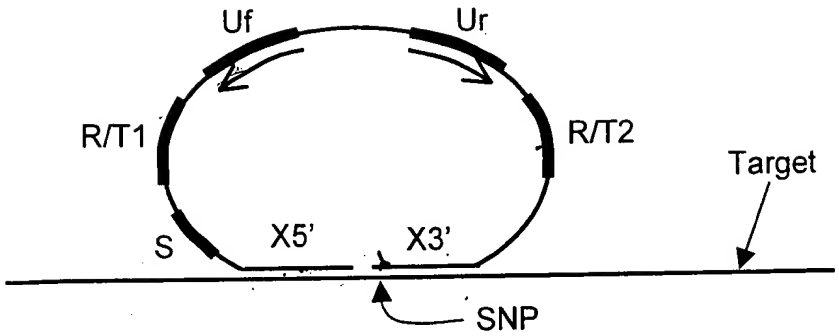


FIG. 5

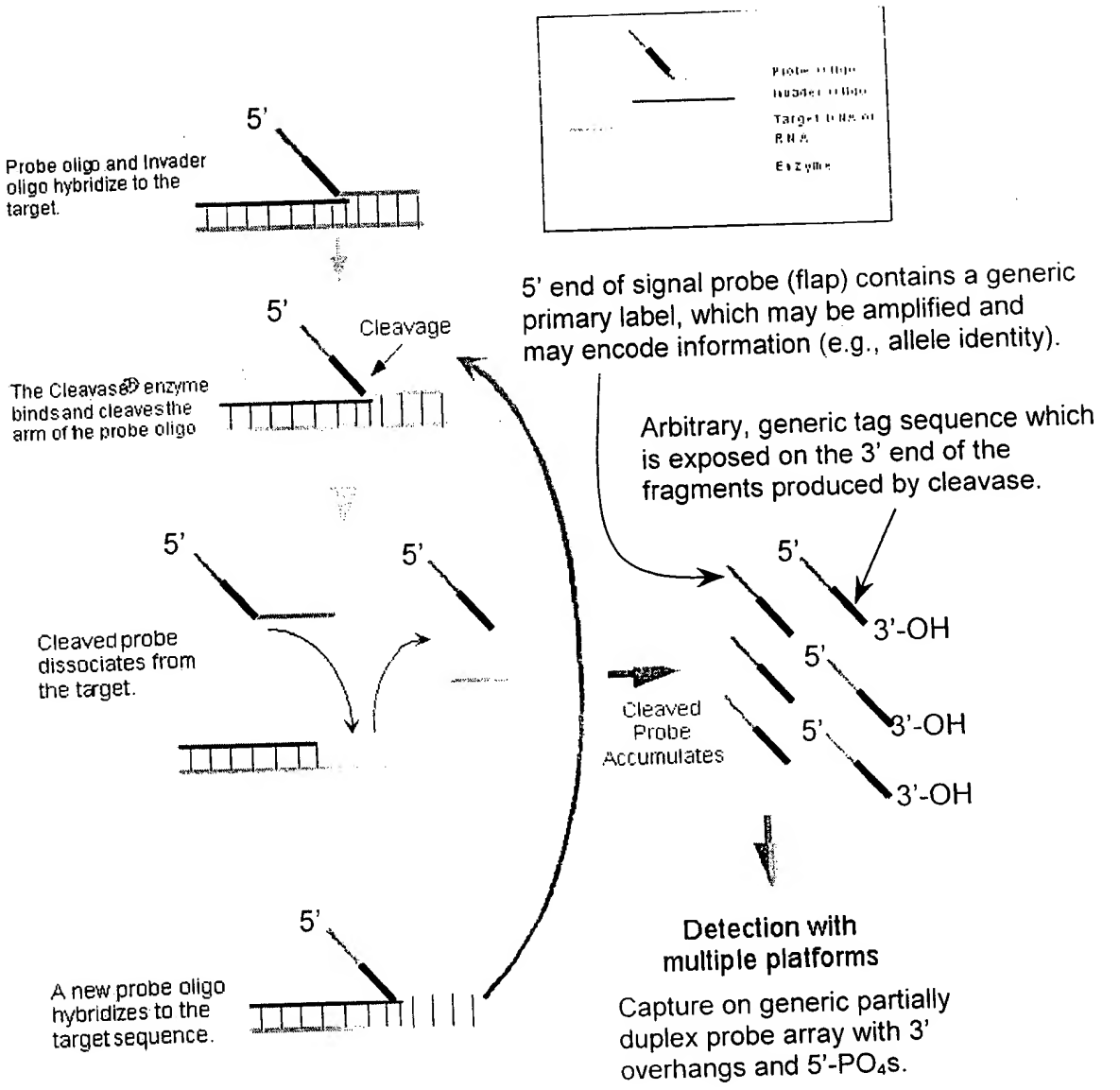

5'
Probe oligo and Invader oligo hybridize to the target.
5'
Cleavage
The Cleavase® enzyme binds and cleaves the arm of the probe oligo
5'
5'
Cleaved probe dissociates from the target.
5'
A new probe oligo hybridizes to the target sequence.
5' end of signal probe (flap) contains a generic primary label, which may be amplified and may encode information (e.g., allele identity).
Arbitrary, generic tag sequence which is exposed on the 3' end of the fragments produced by cleavase.
5'
3'-OH
5'
3'-OH
5'
3'-OH
Cleaved Probe Accumulates
Detection with multiple platforms
Capture on generic partially duplex probe array with 3' overhangs and 5'-PO4s.

FIG. 6